

IRON COVER

Related Applications

This application is a continuation-in-part application of the provisional application entitled "Iron Cover" filed 11/26/99, Serial No. 60/167,580.

Background of the Invention

Field. This invention relates to heating irons. In particular, it relates to heating iron covers for ski wax irons.

State of the Art. A number of iron covers are known. Iron covers are used for a variety of purposes such as preventing the scorching of materials being ironed. *Doyel*, U.S. Patent No. 5,987,788 provides a removable iron cover with steam passage holes made of polytetrafluoroethylene (PTFE) inserted over the sole plate of a steam iron to facilitate the efficient delivery of steam from the iron to the material being ironed. It also reduces friction, and acts as a thermal barrier to prevent burning of the material. *Emberston-Nash et al*, U.S. Patent No. 5,815,962 provides another attachable cover for the soleplate of a hand steam iron made of a relatively thin sheet of friction reducing PTFE material including steam passage holes which provides a low friction heat shield for hand pressing steam irons.

A number of curling iron cases have been designed for storing curling irons that are still warm. These irons cannot simply be stowed in a suitcase or kit where items may be damaged in close proximity to the heated iron. Thus the prior art contains a number of curling iron travel cases used to store a hot curling iron, such as *Lykowski*, U.S. Patent No. 5,950,826 which also provides a single travel case with multiple storage compartments for the curling iron and other hair maintenance devices and materials.

Ski wax irons are used to apply various types of waxes to the bottoms of skis, snowboards, and toboggans. Different waxes are used to alter the performance characteristics of the skies to suit a particular snow conditions and protect the skis from moisture. Conventional methods of applying a wax coating to a surface use a solid bar of wax to rub the wax from the bar onto the surface. This hand rubbing typically left a non-uniform and discontinuous layer of wax on the surface, which then had to be smoothed with a piece of plastic or cork. Others used a hand-held propane torch to melt the wax to form a uniform coating on the surface. Still others applied wax to the skies by brushing or rolling melted wax onto the skies.

Ski irons were developed to not only melt the solid wax to drop onto the sliding surfaces, but to then evenly distribute the same using the sole of the hot iron in a trowel-like movement. Thus the bottom of the ski wax iron must be smooth to prevent uneven application of the wax or roughing the sliding surface; thereby reducing the ski's performance. Others use ski wax irons to melt and apply a wax laminate to the bottom of the ski, such as the wax laminate described in *Fitzburgh*, U.S. Patent No. 5,534,061.

These ski wax irons typically only get up to about 200 degrees Celcius to prevent breaking down the components of various types of waxes and bases of skis. However, when turned off, they still are too hot to be placed into an equipment bag without damaging other items placed therein, such as supplies of waxes. Oftentimes, when used in the field the hot ski wax iron is placed in the snow to rapidly cool it before storage. This causes water to get into the electronics damaging the iron. The sole of these ski wax irons must also be protected during storage from marring or damage. The iron cover

described below provides a protective cover for these ski wax irons to aid in ready storage while still warm.

Objectives of the Invention. The objective of the present invention is to provide a cover for the new ski wax irons used to apply waxes to the bottom of skis, although it can be used with other conventional irons.

A further objective is to provide an iron cover, which protects the bottom surface of the iron from nicks, scrapes, and marring. The bottoms of ski wax irons must be protected during storage to prevent them from accidentally being dented or marred in a manner to affect the smooth application of waxes to the bottoms of skis.

Still a further objective is to provide a cover, which partially insulates the hot iron from damaging articles placed in a bag with the cooling iron. These ski wax irons often are used quickly in the field and then have to be put in an equipment bag while still warm. Thus, there is a need for heat resistant, padded storage iron cover for ski wax irons to insure a better performance of skis. It also indirectly better protects the base of the skis.

Summary of the Invention

The invention comprises an iron cover having a padded bottom covered by a flexible non-transmitting heat resistant liner shaped to fit over and cover the sole of a ski wax iron. The bottom padding is of sufficient thickness to prevent the sole of the iron from being damaged by accidental contact. Attached to the padded bottom are a plurality of side flaps also covered by a heat resistant liner. The side flaps are expandably secured together to extend sufficiently around the sides of the iron to secure the iron cover there around with draw strings or other securing means. This oversize side flap configuration allows various sized of irons to be placed and secured within the cover. Each side flap is separated and structured when folded about the iron to define side heat release vents therebetween to allow heat to escape from the cooling hot iron placed therein for storage.

The preferred embodiment uses a flannel type of material for the heat resistant liner, although other materials such as plastics, metal, and fabrics could be used which protect from abrasion, are heat resistant, and will not readily transmit heat from the cooling iron. The preferred material also will not rub off against the sole of the iron during storage. Examples of preferred materials are:

- a. 16 oz. Neoprene coated fiberglass, which is particularly suited to protect from abrasion and liquids,
- b. 18 oz white general purpose fiberglass, 20 oz yellow fiberglass coated for abrasion that has a 1000 degree F. melt temperature,
- c. 22 oz Kevlar blend, which is abrasion and heat resistant and has a 900 degree F. melt temperature,

- d. 28 oz black fiberglass, which is coated for abrasion resistance and has a 1200 degree F. melt temperature,
- e. 30 oz yellow fiberglass, which is coated for abrasion resistance and has a 1000 degree F. melt temperature,
- f. 32 oz orange fiberglass, which is coated for abrasion resistance and has a 1000 degree F. melt temperature,
- g. 18 oz bronze silica/ceramic, which is coated for abrasion resistance and has a 3000 degree F. melt temperature,
- h. 12 oz duck, which is fire, water, mildew resistant,
- i. 32 oz chrome tanned leather,
- j. para aramid fiber, which is abrasion, cut and temperature resistant and has high tensile strength used for protective clothing,
- k. ceramic fiber, which has very high temperature resistance, and low thermal conductivity, used in kiln car seals,
- l. meta aramid fiber, which is inherently flame retardant and has good temperature resistance used in protective fire proximity clothing ,
- m. silica fiber, which has very high temperature resistance, low thermal conductivity, and low abrasion resistance,
- n. Permanent flame retardant (PFR) rayon, which has good strength and is used in fire proximity clothing.

The heat resistant liner is generally covered by another flexible material resistant to abrasion, such as nylon, to protect the liner from being cut or abraded. However, the

iron cover could be made entirely of the heat resistant liner material, provided it had sufficient durability.

The preferred iron cover shape is square, with the liner made of a heat resistant material laid out in a cross-shape to form side flaps with cut out corners surrounding the bottom area, which covers the sole of the iron. A similar shaped nylon outer cover is then placed over the liner, and a layer of cotton, plastic, or other padding added therebetween to pad the bottom of the iron cover to prevent damage to the sole of the iron. The heat resistant liner is then stitched, welded, or secured to the outer cover to secure the padding in position and form open loops or holes in the ends of the side flaps. A rubberized nylon or plastic cord is then threaded between the loops or holes to raise the flaps to secure around an iron and form the heat release vents. The nylon cord preferably has a fastener associated with its ends to enable the cord shortened or lengthened for tightening around the sides of different sized irons. Various types of fasteners can be used for this purpose, or the ends of the elasticized cord may be secured or tied together without a fastener.

Other iron cover shapes may be employed as long as they are sufficient to cover the sole of the iron to protect it from dirt, scratches, dents or any other impact damage, which would mar the iron sole surface. However, the cover and flaps must be expandable to secure around the iron and form or have side heat release vent holes when secured about a cooling iron to release heat.

Also attached to the bottom of the iron cover is an openable strap storage system to secure about the iron placed within the iron cover. This strap storage system is also configured to secure folded iron power cords to the iron cover. The preferred

embodiment of the storage system comprises an securable strap with corresponding hook and loop strips securing the ends and corresponding segments. This strap is sewn to the bottom of the cover in a manner to removably secure around an iron placed therein, but having additional length to fold back on itself in a manner to secure folded power cords therebetween. In the preferred embodiment, this is accomplished by lining segments of the strap with hoop and loop strips, so that the end of the strap can be threaded through a cinch attached to one end of the sewn strap, which is doubled back over the top of the iron cover to secure between the ends of the strap the folded power cord of the iron.

To use the invention, a hot iron is first allowed to cool somewhat so that it won't singe the liner. Then it is placed within the cover on the heat resistant liner segment covering the padded bottom and secured therein with the elastic cord holding the sides flaps. The iron is further secured by the strap system and the iron cord is then folded and secured thereto with the double backed ends of the strap affixed with the corresponding hook and loop strips. Thus stored, the iron cover protects the sole of the iron from scratches and marring. It also prevents direct transmission of the heat from the iron, and allows hot irons to gradually cool during storage. Ski wax irons may therefore be put away in an equipment bag or kit while still warm without damaging waxes and other stored equipment. The power strap storage system also secures the wrapped iron cord and keeps it neatly packed.

Description of the Illustrated Embodiments

As shown in Fig. 1, the invention 10 comprises an iron cover 12 having a square padded bottom 14 formed by a flexible heat resistant reflective liner 16 sewn to a nylon cover 17 shaped to fit over and cover the sole of a ski wax iron. The padded bottom 14 is of sufficient thickness to prevent the sole of the iron from being damaged by accidental contact. Attached to the padded bottom 14 are a plurality of side flaps 18 also covered by the heat resistant liner 16. The side flaps 18 are expandably secured together to extend sufficiently around the sides of the iron placed therein to secure the iron cover there around with draw strings or other securing means. This preferred embodiment uses a reflective nylon heat resistant type of material for the heat resistant liner 16, and a durable nylon for the cover 17.

A strap webbing 20 storage system surrounds and is attached to the bottom 14 to secure the iron and power cord in place. Each side flap 18 is separated and structured when folded about the iron to define side heat release vents 22 therebetween to allow heat to escape from the cooling hot iron placed therein for storage. A drawstring 24 with a fastener 26 shown in Fig. 2 passes through loops 28 in the side flaps 18 to secure the side flaps 18 about the sides of the iron to allow the vents to release the heat.

Fig. 3 shows the padded bottom 14 and sides flaps 18 covered with the nylon cover 17. The padded bottom 14 is contains a quarter inch thick cotton pad (not shown). The strap webbing 20 is sewn to the bottom 14 as shown to wrap around the iron cover.

Fig. 4 is a perspective view of another preferred embodiment of the invention 10. This embodiment employs an iron cover 12 made of a felt liner 16 covered by a nylon. It is shown secured about a Swix digital iron, which gets up to 352.4 degrees Fahrenheit.



1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358</
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--------